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Philos. Trans. Vol. XLIX. TAB. III.

Fig. 1. p. 71.

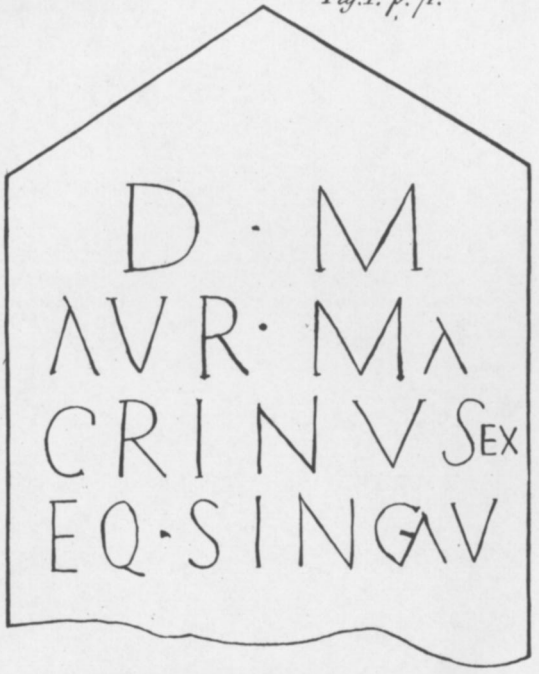


Fig. 2.
p. 156.

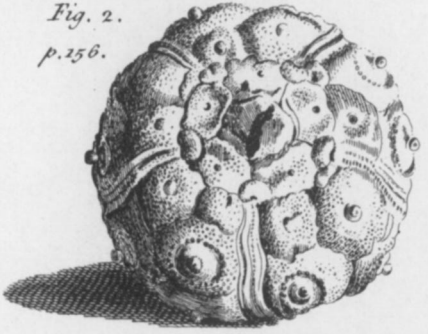
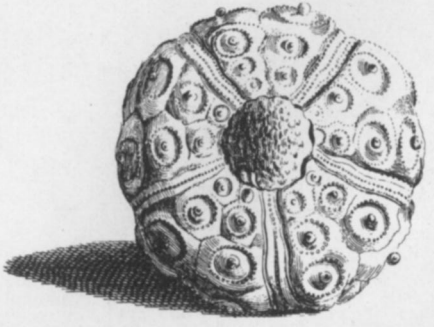


Fig. 3



J. Mynde sc.

XXVI. *Remarks upon a petrified Echinus of a ſingular kind, ſhewn to the Royal Society,* April 24, 1755, *by the Reverend* Richard Pococke, *LL. D. Archdeacon of* Dublin, *and F. R. S. found on* Bunnan's-*Land in the Pariſh of* Bovingdon *in* Hertfordſhire, *which is a Clay, and ſuppoſed to have been brought with the Chalk, dug out of a Pit in the Field. By* James Parſons, *M. D. and F. R. S.*

July 9, 1755.

Read April 17, 1755.

THE round echinites are for the moſt part found in chalk-pits, and they are in general, when recent, the moſt tender in their ſhells; ſo that the chalk is the moſt favourable bed for them to be preſerved in long enough to be petrified; whereas in other kinds of matter theſe would be mouldered and deſtroyed before the petrification could commence; and it is very ſingular, that almoſt all thoſe in the chalk are filled with flint, or partly chalk and partly flint, and ſometimes with cryſtal. Now, as all flints and agates are nothing leſs than cryſtal debaſed by earth, and as it is in beds of chalk that theſe, as well as multitudes of large ſtones, are found, one would be almoſt induced to believe, that chalk degenerated

into flint; or, in other words, that flint was produced by chalk originally. And indeed I have many ſpecimens myſelf, that ſeem to prove it; in ſome of which they ſeem to ſhew the gradual change from the one to the other, not at all like a ſudden appoſition of chalk to flint.

Other kinds of echinites, ſuch as the *Echini cordati*, or heart-ſhaped echinite, the pileati or conic, the galeati or helmet-ſhaped, with ſeveral other kinds, are often formed of other ſpecies of ſtony particles.

The foſſil before you, being one of the oval kind, with large papillæ, is the *Echinometra digitata ſecunda rotunda vel cidaris Mauri* of *Rumphius*, which, with the other oval echinites, are very rarely found but in chalk: and it is remarkable, that whether they are filled with chalk, flint, or chryſtal, their ſhells break with a ſelenitical appearance, juſt as the lapides Judaici, and all other ſpecies of echinites found in chalk-pits, do.

XXVII.